RÉPUBLIQUE FRANÇAISE.

OFFICE NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE.

BREVET D'INVENTION.

XIX. — Chirurgie, médecine, hygiène, salubrité, sécurité.

N° 403.203

4. — Appareils et procédés de secours et de préservation.

Dispositif pour cultiver, développer, conserver, emballer et expédier des germes tels que microbes, levures, bactéries, etc., sous une forme non liquide.

LABORATOIRE DE MONTREUX (Société anonyme) résidant en Suisse.

Demandé le 21 mai 1909.

Délivré le 18 septembre 1909. — Publié le 28 octobre 1909.

L'objet de la présente invention consiste en un dispositif pour cultiver, développer, conserver, emballer et expédier des germes tels que ferments, microbes, levures, bactéries, etc., sous une forme non liquide, à l'état pur de cultures actives et vivantes, en une quantité aussi grande que possible sous un volume restreint.

Ce dispositif consiste, en principe, en un support contenu dans un récipient approprié et présentant une surface aérée aussi grande que possible sous le volume le plus réduit, ledit support étant recouvert ou imprégné d'une substance nutritive ensemencée des ferments, microbes, etc., que l'on veut cultiver, développer, etc.

Le principe de l'invention pourrait, en somme, être représenté dans sa plus simple expression par une mèche qui serait imprégnée de substance nutritive et du germe à cultiver, développer, conserver, etc., cette mèche étant renfermée dans un récipient approprié, aseptiquement hermétique.

Le dessin ci-annexé, donné à titre d'exemple, montre diverses formes d'exécution de supports répondant à l'invention :

Les fig. 1 et 1ª montrent, respectivement en coupe longitudinale et transversale, un support renfermé dans un récipient *a* et constitué par une série de tubes *b* en matière convenable quelconque telle, par exemple, que du verre, métal, bois, craie, plâtre, papier, textile, pâte de bois, etc., recouverts ou imprégnés de substance nutritive ensemencée.

Dans la fig. 2, le support est constitué par des feuilles, bandes, fils, rubans, plaques, etc., *c* en matière convenable quelconque et tendus en zigzag sur un cadre *d*.

Dans la fig. 3, le support est constitué comme dans l'exemple de fig. 2, mais les feuilles, bandes, fils, etc., *c*, sont tendus parallèlement sur le cadre.

Le support représenté en fig. 4 consiste en une plaque, bande, feuille, etc., *e*, de substance convenable quelconque, roulée en spirale, avec un léger espace entre chaque spire. Il va de soi que, dans cet exemple, on pourrait rouler en spirale plusieurs plaques, bandes, feuilles, etc., un léger espace étant ménagé entre les spires.

Dans l'exemple que montre la fig. 5, le support est constitué par un corps tubulaire *f* en forme de nid d'abeilles; ce corps, dont la matière peut différer, peut être soit formé d'une seule pièce, soit d'une série de tubes assemblés.

Prix du fascicule : 1 franc.

N° 403.203 Société anonyme : Pl. unique
Laboratoire de Montreux

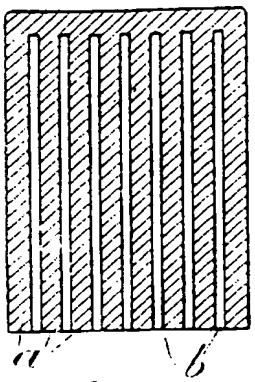

Fig. 1.

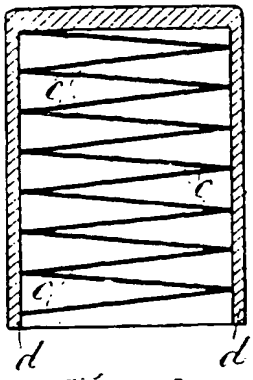

Fig. 2.

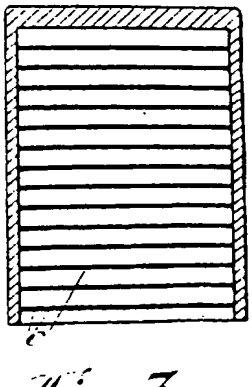

Fig. 3.

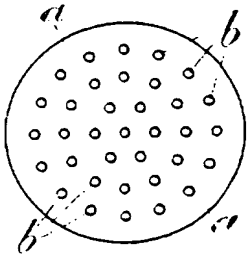

Fig. 1a.

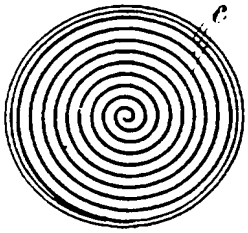

Fig. 4.

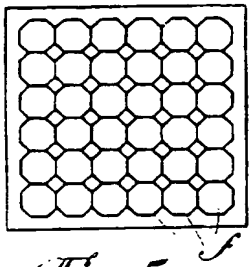

Fig. 5.

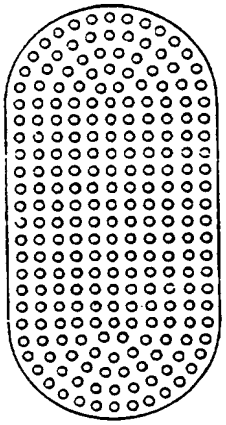

Fig. 6.

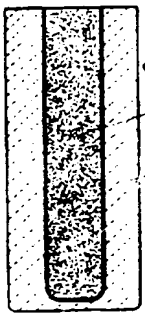

Fig. 7.

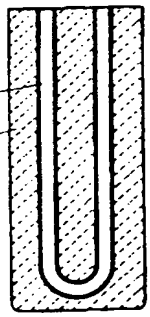

Fig. 8.

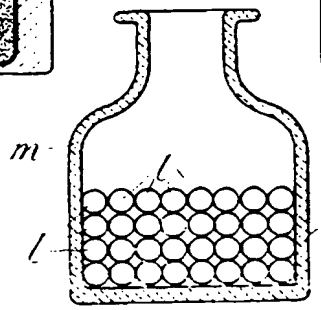

Fig. 9.

For information purposes only

FRENCH REPUBLIC

NATIONAL OFFICE OF INDUSTRIAL PROPERTY.

PATENT

XIX. - Surgery, medicine, hygiene, health, safety

4. - DEVICES AND PROCESSES FOR ASSISTANCE AND PROTECTION

No. 403.203

Device for culturing, growing, preserving, packing and despatching micro-organisms such as microbes, yeasts, bacteria, etc., in non-liquid form.

LABORATOIRE DE MONTREUX (MONTREUX LABORATORY) (LIMITED COMPANY) located in Switzerland.

Applied for on 21 May 1909.

Granted on 18 September 1909. - Published on 28 October 1909.

The present invention relates to a device for culturing, growing, preserving, packing and despatching micro-organisms such as ferments, microbes, yeasts, bacteria, etc., in non-liquid form, in the pure state of active and living cultures, in a quantity which is as large as possible and in a limited volume.

This device consists, in principle, of a support which is contained in an appropriate receptacle and which exhibits an aerated surface which is as large as possible in association with a volume which is as small as possible, with the said support being covered or impregnated with a nutrient substance which is seeded with ferments, microbes, etc., which it is desired to culture, grow, etc.

In its simplest terms, the principle of the invention can, in short, be represented by a wick which is impregnated with a nutrient substance and the micro-organism to be cultured, grown, preserved, etc., with this wick being enclosed in an appropriate receptacle which is aseptically hermetic.

The attached drawing, provided by way of example, shows various embodiments of the support corresponding to the invention:

Fig. 1 and 1^a show, respectively, in longitudinal and transverse section, a support which is enclosed in a receptacle *a* and consists of a series of tubes *b* made out of any suitable material such as, for example, glass, metal, wood, chalk, plaster, paper, textile, wood pulp, etc., which tubes are covered or impregnated with a seeded nutrient substance.

In Fig. 2, the support consists of sheets, strips, filaments, tapes, plates, etc., *c* made out of any suitable material and stretched in a zigzag on a frame *d*.

In Fig. 3, the constitution of the support is the same as in the example of Figure 2, but the sheets, strips, filaments, etc., *c*, are stretched parallel to the frame.

The support depicted in Fig. 4 consists of a plate, strip, sheet, etc., *e*, of any suitable substance which is rolled into a spiral, leaving a slight space between each turn. It goes without saying that it would be possible, in this example, to roll several plates, strips, sheets, etc., in spiral form, with a sight space being arranged between the turns.

In the example shown in Fig. 5, the support consists of a tubular body *f* in honeycomb form; this body, the material of which can differ, can either be formed from one single piece or from a series of assembled tubes.

Price of the offprint: 1 franc.

The support shown in Fig. 6 is formed from a block of any suitable material which is drilled with a large number of holes and this constitutes, as it were, a sponge which is impregnated with a seeded nutrient substance.

In Fig. 7, the support consists of a block *g* of porous material, chalk, plaster, pumice, sponge, etc., which is accommodated in a receptacle *h*.

The support depicted in Fig. 8 consists of a U tube *i*, which is made of any suitable material and which is placed in a receptacle *k*.

Finally, in the example shown in Fig. 9, the support consists of a number of grains, granules, peas, etc., *l*, which are enclosed in a bottle *m*.

The shape, the dimensions and the materials employed for the support and the receptacle which contains it will be able to differ, depending on the sought-after aim, the micro-organism employed, the temperature and the climate to which it is to be subjected, as well as on the quantity of micro-organism which is to be preserved and despatched.

The receptacle will be provided with a seal which enables the air to circulate freely around the support while remaining aseptic; this receptacle will be able, for example, to include a stopper having a cotton aseptic filter, or any other device which is suitable for procuring the same result; where appropriate, the receptacle will be able to be hermetic even to the air if the micro-organism to be preserved, cultured, etc., is anaerobic.

The nutrient substance will be able to be, for example, a broth, must, gelatin, agar, gum, etc.

ABSTRACT

Device for culturing, growing, preserving, packing and despatching micro-organisms such as ferments, microbes, yeast, bacteria, etc., in a non-liquid form, in a pure state of active and living cultures, characterized in principle by a support which is contained in an appropriate receptacle and which exhibits an aerated surface which is as large as possible in association with a volume which is as small as possible, with the said support being covered totally or in part with a nutrient substance which is impregnated with ferments, microbes, yeasts, bacteria, etc., which it is desired to culture, grow, preserve, pack and despatch, with the said receptacle being arranged so as to enable the air to circulate freely around the said support, while remaining aseptic, or being hermetic to the air if the micro-organism to be cultured, preserved, etc., is anaerobic.

LABORATOIRE DE MONTREUX (Montreux Laboratory)
(Limited company).
by power of attorney:
Hippolyte Josse.

No. 403.203

Limited Company:
Laboratoire de Montreux
(Montreux Laboratory)

1 plate only

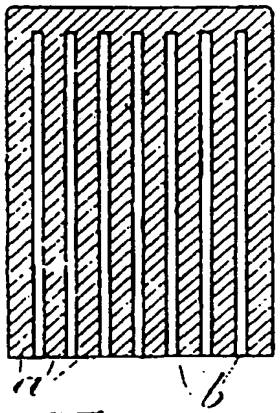

Fig. 1.

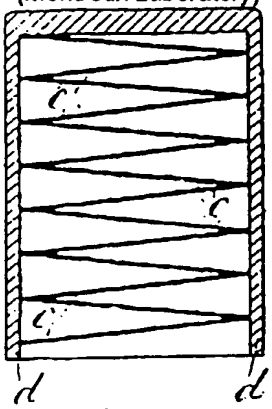

Fig. 2.

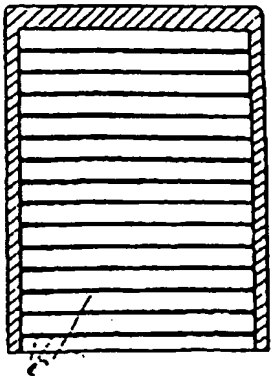

Fig. 3.

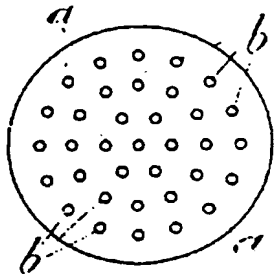

Fig. 1a.

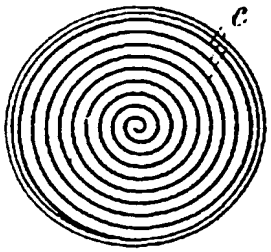

Fig. 4.

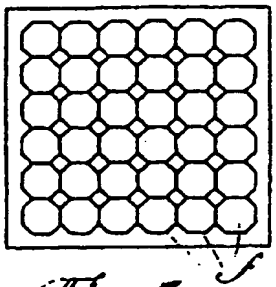

Fig. 5.

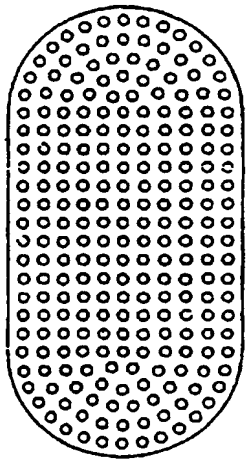

Fig. 6.

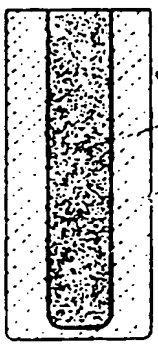

Fig. 7.

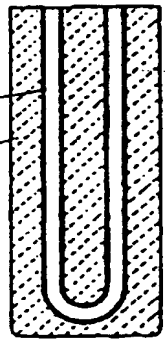

Fig. 8.

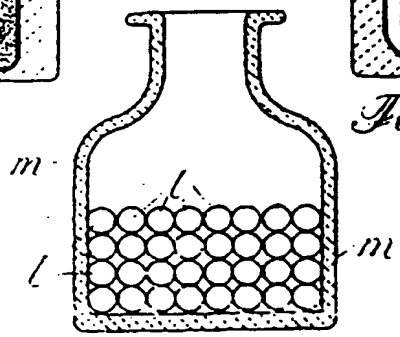

Fig. 9.